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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,847	07/12/2001	Kingsford Kwok	HO-PO2242US0	2189
26271	7590	03/19/2004	EXAMINER	
FULBRIGHT & JAWORSKI, LLP 1301 MCKINNEY SUITE 5100 HOUSTON, TX 77010-3095			VANATTA, AMY B	
			ART UNIT	PAPER NUMBER
			3765	
			DATE MAILED: 03/19/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,847

Applicant(s)

KWOK, KINGSFORD

Examiner

Amy B. Vanatta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3,4,5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in Paper No. 7 is acknowledged. In view of Applicant's arguments and the amendment of claim 15, the restriction requirement is hereby withdrawn. An action on the merits of all claims follows.

Specification

2. The disclosure is objected to because of the following informalities: In numerous instances, the specification discloses that the stones are made of "carbon silicon". Such a material is confusing. It is unclear whether applicant intends to claim "carbon and silicon", or "silicon carbide".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 2, 9-14, 20-21, 23, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2, 9, 11, 20, 23, and 27 recite "carbon silicon". Such a term is confusing and appears to be erroneous. It is unclear whether applicant intends to claim "carbon and silicon", or "silicon carbide".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 15-20, and 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2514793 in view of Hopkins et al (US 4,750,227).

FR 2514793 (see English translation) discloses a method for providing a textile with a stone washed effect, including steps of attaching abrasive stones (11 or 16) to the inside surface of a chamber (3), placing a textile material into the chamber, moving the chamber so that the stones contact the textile material to wear and fade the textile (see translation pages 3-4), and removing the textile from the chamber (see translation page 3, line 8). The document also discloses an apparatus including a plurality of stones (11 or 16), each having a connector (e.g. 12), and a chamber (3) adapted to hold textile material, the chamber having an inner surface with openings therein which are adapted to receive the connectors (see, e.g., page 5, last line). The abrasive stones can be attached and removed as claimed, and the chamber is movable. The French document does not disclose that the stones are artificial, but rather discloses that the stones are made of sandstone or millstone. The document also does not disclose that the stones comprise carbon silicon. Hopkins et al disclose artificial abrasive structures which are used to abrade fabrics. Hopkins teaches that these artificial abrasive structures are advantageous over traditionally used natural abrasives, since the artificial

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abrasive structures have a more uniform abrasive surface which does not damage or excessively wear the fabrics, they do not deteriorate with use, and they result in garments having consistent nap and low wear. Hopkins teaches that the artificial abrasive structures may comprise silicon carbide (col. 3, line 52) as in claims 2, 20, and 23. Hopkins also teaches that the structures may be in the form of blocks or other shapes, such as spheres, ellipsoids, etc. Thus, the structures form stones to the extent claimed and have shapes similar to the stones or blocks of FR 2514793. The stones are porous as in claim 16. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the artificial stones of Hopkins as the abrasive elements (11 or 16) in the method or apparatus of FR 2514793, in order to a more uniform abrasive surface which does not damage or excessively wear the fabrics, does not deteriorate with use, and which results in garments having consistent nap and low wear. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make these stones used in the method and apparatus of FR 2514793 out of silicon carbide, since Hopkins specifically teaches the use of silicon carbide as an advantageous material for such artificial stones in order to produce stones which provide a more optimal product. Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 8, Hopkins discloses that the abrasive structures may come in a variety of shapes (block, ellipsoids, spheres, etc.). One having routine skill in the art

would recognize that desirable random and varied effects will be obtained in products formed by the method of FR 2514793, modified to use the stones of Hopkins, if the stones are not all of uniform and identical shape. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use stones of different shapes in the method of FR 2514793 modified in view of Hopkins, since Hopkins teaches that the abrasive structures may be formed in a variety of shapes, and one having routine skill in the art would recognize that desirable random and varied effects will be obtained in products by using different shapes.

Regarding claim 17, the stones of FR 2514793 have a connector which is a nut and bolt (12,13 (pg. 5, lines 6-8). Regarding claims 5 and 18, it is not disclosed of what material the nuts and bolts are made, however nuts and bolts are conventionally made of stainless steel in order to provide strength and prevent rusting. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the nut and bolt connectors of FR 2514793 out of stainless steel, since stainless steel is conventionally used for nuts and bolts since it is strong and resists rusting, and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 6-7, FR 2514793 shows a plurality of stones attached to the inside surface of the chamber. These stones cover the inside surface of the chamber at the position in which they are attached (i.e. they cover the portion which they overlie). Thus, the step of "covering at least a portion of the inside surface of the chamber with

an abrasive material" is met by attaching one or more of these stones to the inside surface. The stones comprise "grind stone" to the extent recited in claim 7.

Regarding claim 25, the distance of the stone upper surface from the chamber inner surface is not disclosed by FR '793. The determination of the optimal size of the stones, however, is within the routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to size the stones in the method of FR 2514793 such that the distance of the uppermost portion of the stones from the chamber surface is 0.75 inches to 1.25 inches, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claims 3, 26, and 27, FR 2514793 does not disclose a step of adding unattached abrasive stones to the chamber. Hopkins, however discloses adding unattached artificial abrasive stones to the inside of a chamber to produce stonewashed effects. Hopkins discloses that the stones may comprise silicon carbide, as in claim 27. One having routine skill in the art would recognize that by adding unattached artificial stones to the interior of the chamber of FR '793, in addition to the attached abrasive stones, one would obtain increased stonewashing effects. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add unattached artificial abrasive stones into the interior of the chamber of FR 2514793 such as disclosed by Hopkins in order to produce greater stonewashed effects in the product. Regarding claim 26, FR '793 does disclose that the abrasive stones which are

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attached to the inside surface of the chamber are removable. Moreover, Hopkins discloses that the artificial abrasive stones are reusable in multiple washing cycles. Thus, one having routine skill in the art would recognize that it would be advantageous to remove an attached artificial stone from the chamber of FR '793 modified in view of Hopkins, which has become worn on the surface which faces outwardly, and to use this stone as one of the stones which are added to the inside of the chamber, as in the method of FR '793 modified in view of Hopkins in this paragraph (above), so as to expose its less worn sides to the textile which is being stonewashed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to unattach one of the attached stones of FR 2514793 and add it to the interior of the chamber, so as to expose its less worn sides to the textile in order to increase the stonewashing effects, since FR '793 teaches that the attached stones are removable, and Hopkins teaches adding the artificial stones to the interior of the chamber for stonewashing.

Regarding claim 19, FR '793 discloses that the stones are attached by means of a screw or bolt (12) which extends from the inner surface of the chamber. The screw is threaded. See translation pg. 5, lines 6-8 and 23-24. Nuts 13 are screwed onto the threaded part of the rods 12, however, in order to secure them, rather than providing the stones with a threaded hole, as recited in claim 19. Such means of fastening are regarded as equivalent in the art, however; a threaded screw which is secured by a nut or secured by means of threads on the receiving member (here, the stone) are used equivalently in the art to fasten members together via a screw. It would have been

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obvious to one having ordinary skill in the art at the time the invention was made to secure the stones in the apparatus FR 2514793 by providing threads in the bores of the stones rather than by use of a nut, since nuts and threaded bores are regarded as equivalent means of fastening in the art.

6. Claims 11, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2514793 in view of Hopkins et al (US 4,750,227), in further view of Dischler (US 5,363,599).

FR 2514793 (see English translation) discloses a method for providing a textile with a stone washed effect, including steps of attaching abrasive stones (11 or 16) to the inside surface of a chamber (3), placing a textile material into the chamber, moving the chamber so that the stones contact the textile material to wear and fade the textile (see translation pages 3-4), and removing the textile from the chamber (see translation page 3, line 8). FR '793 does not disclose that the stones are artificial, but rather discloses that the stones are made of sandstone or millstone. The document also does not disclose that the stones comprise carbon silicon. Hopkins et al disclose artificial abrasive structures which are used to abrade fabrics. Hopkins teaches that these artificial abrasive structures are advantageous over traditionally used natural abrasives, since the artificial abrasive structures have a more uniform abrasive surface which does not damage or excessively wear the fabrics, they do not deteriorate with use, and they result in garments having consistent nap and low wear. Hopkins teaches that the artificial abrasive structures may comprise silicon carbide (col. 3, line 52). Hopkins also

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teaches that the structures may be in the form of blocks or other shapes, such as spheres, ellipsoids, etc. Thus, the structures form stones to the extent claimed and have shapes similar to the stones or blocks of FR 2514793. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the artificial stones of Hopkins as the abrasive elements (11 or 16) in the method or apparatus of FR 2514793, in order to a more uniform abrasive surface which does not damage or excessively wear the fabrics, does not deteriorate with use, and which results in garments having consistent nap and low wear. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make these stones used in the method and apparatus of FR 2514793 out of silicon carbide, since Hopkins specifically teaches the use of silicon carbide as an advantageous material for such artificial stones in order to produce stones which provide a more optimal product. Moreover, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

FR '793 does not disclose a step of adding unattached abrasive stones, rubber balls, or grind stone to the chamber. Hopkins, however, discloses adding unattached artificial abrasive stones to the inside of a chamber to produce stonewashed effects. Dischler discloses that is known to add rubber balls, enzymes, and/ or pumice (col. 1, lines 14-30) to the inside of a chamber for providing aging or "distressed" effects on the textile. It is noted that pumice forms "grind stone" to the extent recited in claim 12. One having routine skill in the art would recognize that by adding unattached artificial

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stones, rubber balls, and grindstone to the interior of the chamber of FR '793, in addition to the attached abrasive stones, one would obtain increased stonewashing effects. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add unattached artificial abrasive stones, rubber balls, and grindstone to the interior of the chamber of FR 2514793 in order to produce greater stonewashed effects in the product since the use of such elements inside a chamber for stonewashing effects is well known in the art, as disclosed by Hopkins and Dischler.

Regarding claim 13, Hopkins discloses in Example 1 that the stones are 1" x 2" x 3" in size (col. 4). Although FR '793 does not disclose the dimensions of the attached stones, the figures show the size of the stones relative to the size of the chamber, and it can be seen from such figures that the stones shown are clearly larger than 1"x2"x3". Thus, it appears that the limitation of claim 13 is met since the attached stones shown by FR '793 appear to be smaller than the stones disclosed as added by Hopkins. Moreover, one having routine skill in the art would recognize that the added stones should be small enough they do not damage the insides of the chamber or the textiles in the chamber. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use unattached stones which are smaller than the attached stones in method of FR 2514793 modified in view of Hopkins, in order to ensure that the chamber is not damaged by the stones which are moving around inside of it; and furthermore, since a mere change in size is generally within the routine skill in the art.

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7. Claims 9, 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2514793 in view of Keipert et al (US 6,645,263).

FR 2514793 (see English translation) discloses a method for providing a textile with a stone washed effect, including steps of attaching abrasive stones (11 or 16) to the inside surface of a chamber (3), placing a textile material into the chamber, moving the chamber so that the stones contact the textile material to wear and fade the textile (see translation pages 3-4), and removing the textile from the chamber (see translation page 3, line 8). The document also discloses an apparatus including a plurality of stones (11 or 16), each having a connector (e.g. 12), and a chamber (3) adapted to hold textile material, the chamber having an inner surface with openings therein which are adapted to receive the connectors (see, e.g., page 5, last line). The abrasive stones can be attached and removed, and the chamber is movable. The French document does not disclose that the stones are artificial, but rather discloses that the stones are made of sandstone or millstone. The document also does not disclose that the stones comprise carbon silicon and clay, as in claim 9, or carbon silicon, clay, resin, and foaming agents as in claim 21. Keipert et al disclose artificial abrasive structures which are made of various materials which may include silicon carbide (col. 7, line 12), clay (col. 6, line 10), resin (col. 5, line 66 – col. 6, line 2), and foaming agents (col. 9, lines 11-12). Keipert teaches that abrasive articles made of such material exhibit optimal abrading features. The abrasive structures of Keipert are porous as in claim 16. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the artificial abrasive structure of Keipert as the abrasive elements (11

or 16) in the method or apparatus of FR 2514793, in order to provide more optimal abrading of the textiles. Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make these stones used in the method and apparatus of FR 2514793 out of silicon carbide, clay, resin, and foaming agents, since such materials are well known to be used in making abrasive elements, and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claims 9 and 17, the stones of FR 2514793 have a connector which is a nut and bolt (12,13 (pg. 5, lines 6-8). It is not disclosed of what material the nuts and bolts are made, however nuts and bolts are conventionally made of stainless steel in order to provide strength and prevent rusting. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the nut and bolt connectors of FR 2514793 out of stainless steel, since stainless steel is conventionally used for nuts and bolts since it is strong and resists rusting, and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding claim 19, FR '793 discloses that the stones are attached by means of a screw or bolt (12) which extends from the inner surface of the chamber. The screw is threaded. See translation pg. 5, lines 6-8 and 23-24. Nuts 13 are screwed onto the threaded part of the rods 12, however, in order to secure them, rather than providing

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the stones with a threaded hole, as recited in claim 19. Such means of fastening are regarded as equivalent in the art, however; a threaded screw which is secured by a nut or secured by means of threads on the receiving member (here, the stone) are used equivalently in the art to fasten members together via a screw. It would have been obvious to one having ordinary skill in the art at the time the invention was made to secure the stones in the apparatus FR 2514793 by providing threads in the bores of the stones rather than by use of a nut, since nuts and threaded bores are regarded as equivalent means of fastening in the art.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2514793 in view of Keipert et al (US 6,645,263), in further view of Hopkins et al (US 4,750,227).

FR 2514793, modified in view of Keipert, does not disclose a step of adding unattached abrasive stones to the chamber, as recited in claim 10. Hopkins, however discloses adding unattached artificial abrasive stones to the inside of a chamber to produce stonewashed effects. Hopkins discloses that the stones may comprise silicon carbide. One having routine skill in the art would recognize that by adding unattached artificial stones to the interior of the chamber of FR '793 in addition to the attached abrasive stones, one would obtain increased stonewashing effects. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add unattached artificial abrasive stones into the interior of the chamber of FR 2514793

modified in view of Keipert, such as disclosed by Hopkins, in order to produce greater stonewashed effects in the product.

9. Claims 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over FR 2514793 in view of Keipert et al (US 6,645,263), in further view of Dischler (US 5,363,599).

FR '793 does not disclose a step of adding unattached abrasive stones, as in claim 10, or enzymes, as in claim 14, to the chamber. Dischler discloses that is known to add stones, such as pumice, and enzymes (col. 1, lines 14-30) to the inside of a chamber for providing aging or "distressed" effects on the textile. One having routine skill in the art would recognize that by adding unattached artificial stones and enzymes to the interior of the chamber of FR '793, in addition to the attached abrasive stones, one would obtain increased stonewashing effects. It would have been obvious to one having ordinary skill in the art at the time the invention was made to add unattached artificial abrasive stones and enzymes to the interior of the chamber of FR 2514793 modified in view of Keipert in order to produce greater stonewashed effects in the product since the use of such elements inside a chamber for stonewashing effects is well known in the art, as disclosed by Dischler.

Information Disclosure Statement

10. The information disclosure statement filed 7/11/03 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is

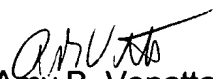
presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language (see FR 1070805). It has been placed in the application file, but the information referred to therein has not been considered.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy B. Vanatta whose telephone number is 703-308-2939. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 703-305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Amy B. Vanatta
Primary Examiner
Art Unit 3765